

KIF5A/NKHC1 Rabbit pAb

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Catalog # AP54347

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q12840
Reactivity	Rat, Mouse
Predicted	Pig, Human, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	117378
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KIF5A/NKHC1
Epitope Specificity	201-300/1032
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Note=Concentrated in the cell body of the neurons, particularly in the perinuclear region.
DISEASE	Defects in KIF5A are the cause of spastic paraplegia autosomal dominant type 10 (SPG10). An inherited degenerative spinal cord disorder characterized by a slow, gradual, progressive weakness and spasticity (stiffness) of the legs. Rate of progression and the severity of symptoms is quite variable. Initial symptoms may include difficulty with balance, weakness and stiffness in the legs, muscle spasms, and dragging the toes when walking. In some forms of the disorder, bladder symptoms (such as incontinence) may appear, or the weakness and stiffness may spread to other parts of the body.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	NKHC1 is a neuronal-specific component of a multi-subunit "molecular motor" complex that mediates intracellular organelle transport. Mutations in the gene encoding NKHC1 cause autosomal dominant spastic paraplegia 10. NKHC1 has a pan-neuronal distribution in the nervous system. Rat tissue extracts by immunoblot of NKHC1 can produce a doublet only in brain and sciatic nerve tissue. NKHC1 is distributed throughout the central nervous system and is enriched in subsets of neurons. Within cultured hippocampal neurons, NKHC1 is concentrated in the perinuclear region of the cell body. Kinesin superfamily proteins like NKHC1 are the molecular motors conveying cargos along microtubules.

Additional Information

Gene ID	3798
Other Names	Kinesin heavy chain isoform 5A, 5.6.1.3, Kinesin heavy chain neuron-specific

1, Neuronal kinesin heavy chain, NKHC, KIF5A ([HGNC:6323](#)), NKHC1

Dilution

IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name

KIF5A ([HGNC:6323](#))

Synonyms

NKHC1

Function

Microtubule-dependent motor required for slow axonal transport of neurofilament proteins (NFH, NFM and NFL). Can induce formation of neurite-like membrane protrusions in non-neuronal cells in a ZFYVE27-dependent manner. The ZFYVE27-KIF5A complex contributes to the vesicular transport of VAPA, VAPB, SURF4, RAB11A, RAB11B and RTN3 proteins in neurons. Required for anterograde axonal transportation of MAPK8IP3/JIP3 which is essential for MAPK8IP3/JIP3 function in axon elongation.

Cellular Location

Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q6QLM7}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q6QLM7}. Perikaryon {ECO:0000250|UniProtKB:Q6QLM7}. Note=Concentrated in the cell body of the neurons, particularly in the perinuclear region {ECO:0000250|UniProtKB:Q6QLM7}

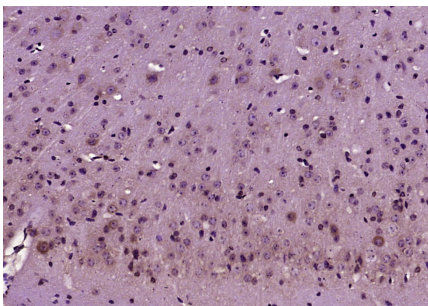
Tissue Location

Distributed throughout the CNS but is highly enriched in subsets of neurons.

Background

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Images



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (KIF5A/NKHC1) Polyclonal Antibody, Unconjugated (AP54347) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.